



**U.S. Department of Energy  
Technical Qualification Program**

# ***Conduct of Assessments Topical Area***

## **Study Guide**

**for the**

***Radiation Protection Personnel  
Qualification Standard***

**March 1997**

## ***Conduct of Assessments for Radiation Protection Personnel***

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**Competency 4.1** Radiation protection personnel shall demonstrate a working level knowledge of assessment (compliance and performance) principles and techniques necessary to identify facility and program deficiencies, event precursors, potential systemic causes, corrective actions, and best practices.

### **1. Supporting Knowledge and/or Skills**

- a. Describe the relevant aspects and process of compliance-based assessments versus performance-based assessments.
- b. Describe the elements of an inspection/assessment plan (investigation, fact-finding, validation, and reporting).
- c. Explain what is meant by an event precursor.
- d. Describe methods used to identify, develop, and group systemic deficiencies identified at the radiation protection program level and facility-specific level.
- e. Explain documentation requirements used for the assessment processes.
- f. Describe several performance indicators that would indicate the need to conduct a radiation protection audit.
- g. Describe the key elements of an assessment appraisal report.
- h. Explain methods used to select interview candidates and conduct interviews for the assessment process.
- i. Describe how corrective actions/recommendations are developed and communicated to line management.
- j. Describe administrative methods used to track and provide closure of identified deficiencies.

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### **2. Self-Study Activities (corresponding to the intent of the above competency)**

- NOTES:
- The DOE Orders are in a state of transition. Please refer to the following world wide web site for a cross reference of new and old Orders: [www.explorer.doe.gov](http://www.explorer.doe.gov)
  - Below are web sites containing many of the references you may need.

<b>Web Sites</b>		
<b>Organization</b>	<b>Site Location</b>	<b>Notes</b>
Department of Energy	<a href="http://cted.inel.gov/cted">http://cted.inel.gov/cted</a>	Clearinghouse for Training, Education, and Development
Department of Energy	<a href="http://www.explorer.doe.gov/">http://www.explorer.doe.gov/</a>	DOE Standards, Guides, and Orders
U.S. House of Representatives	<a href="http://law.house.gov/cfr.htm">http://law.house.gov/cfr.htm</a>	Searchable Code of Federal Regulations

Competency 4.1 addresses assessment techniques personnel can use to assess facility performance, report results, and follow up on actions taken as a result of the assessment. To support the review and understanding of the competency, Supporting Knowledge and Skills and Self-Study Information has been developed. The Self-Study Information specifically addresses those areas needed for understanding the competency. The supporting material for the Self-Study Information include the following documents:

- 10 CFR Part 830.120, Quality Assurance Requirements
- DOE Order 5700.6C, Quality Assurance
- DOE G 414.1-1, Implementation Guide for use with Independent and Management Assessment Requirements of 10 CFR 830.120 and DOE Order 5700.6C
- Performance Based Assessments, by Paul F. Wilson and Richard D. Pearson.
- 10 CFR Part 835, Occupational Radiation Protection
- DOE/EH-0256T, Radiological Control Manual
- G-10 CFR 835/B2, Implementation Guide-Occupational ALARA Program

**Read** chapters 1 though 3 of Performance Based Assessments.

EXERCISE 4.1-A State the three (3) types of assessments.

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EXERCISE 4.1-B Which type of assessment provides the highest amount of objectivity? Why?

EXERCISE 4.1-C In addition to monitoring work performance and identifying abnormal performance and potential problems, what three other responsibilities does a person performing independent assessments have?

EXERCISE 4.1-D Describe the "Performance based" assessment approach.

**Read** chapters 4 through 6 of "Performance Based Assessments."

**Read** sections 1 through IV and Appendix B of implementation guide DOE G 414.1-1

EXERCISE 4.1-E List and describe four (4) factors that must be considered when "determining the scope" of an assessment.

EXERCISE 4.1-F Describe the criteria used in assessing the programs of contractor activities.

EXERCISE 4.1-G List the six (6) elements of a program that should be evaluated.

EXERCISE 4.1-H Describe what a performance indicator is and how they are used.

EXERCISE 4.1-I List nine (9) quality assurance criteria used to determine acceptable and unacceptable performance.

### **3. Summary**

#### Assessments

There are three recognized types of assessment: a. Internal, b. Self, and c. External (also known as Independent).

- a. Internal assessments are those performed by persons within the group or organization. Internal assessments do not offer the same objectivity as independent assessments.
- b. Self Assessment is the evaluation of an individual, group, or organization by that entity itself. Self Assessments are done on a routine, periodic basis.
- c. External (Independent) assessments are those conducted by someone other than the individual, group, or organization. An example of an independent assessment would be an assessment conducted by a regulatory agency. The advantage of an independent assessment is that the assessor is not associated with the actual process or activity.

#### Responsibilities

The responsibilities of personnel performing independent assessments are to monitor work performance, identify abnormal performance and potential problems, identify opportunities for improvement, report results to a level of management having the authority to effect corrective action, and verify satisfactory resolution to problems.

#### Approaches

There are three approaches to the types of assessments listed above, a. Compliance, b. Compliance plus Effectiveness, and c. Performance Based.

- a. Compliance approach is the evaluation of items, processes, or activities against predetermined requirements.
- b. Compliance plus Effectiveness is an analysis focusing on the product, process, and system to determine if suitable requirements were imposed and implemented, resulting in a product which meets client expectations. This type of approach is better than the previous in that the terms "suitable requirements" and "which meets client expectations" are more restrictive and definitive.

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- c. Performance Based assessments are merely a logical extension of the compliance plus effectiveness concept. Performance Based assessments provide additional focus toward client expectation, better practices, and process refinement. Performance Based relates to the outcome/result of an activity or process through direct observation and evaluation against defined requirements.

### **Elements of an Assessment**

There are nine essential elements of conducting an assessment.

- a. Determining the Scope involves defining the boundaries for an evaluation. The following are factors to be considered when determining the assessment boundaries:
- QA Systems- Refer to the criteria of DOE Order 5700.6C, 10 CFR 830.120, or the QA Manual of the facility being assessed.
  - Organizational Entities- Management personnel that have the responsibilities within the evaluation topic.
  - Locations- Physical area where assessment items exist.
  - Programs and Activities- Types of programmatic and work processes.
  - Hierarchy of Procedures- The level of procedures that are used to determine performance during the assessment.
  - Calendar Time- The time allotted for an assessment. Time can affect the population to be assessed. Compliance and performance based assessments use some prior time up to the present.
- b. Preparing the plan includes: scheduling the organization to be assessed, dates of the assessment, team member identification, purpose and scope of the assessment, arrangement for the entrance meeting, necessary escorts, and exit meeting.
- c. Conducting the entrance meeting involves the Team Leader introducing the participants, describing planned assessments, identifying points of contact, arranging for periodic briefings of the organizations being assessed, soliciting and answering questions, and arranging for the exit meeting.
- d. The interview process is a free exchange of information. It is during this time that a positive, cooperative climate is established. The types of questioning include: open, closed, probing, and leading/loading. Open questions are used to obtain general information, closed questions are used to obtain specific information, probing questions are used to obtain

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clarifying or additional information. Leading and loaded questions are to be avoided.

- e. Evaluation techniques are essential because they provide the means to determine acceptability. The techniques include: 1) Traceback, 2) Tracethrough, 3) Comparison, and 4) Reinspect/Retest.
  - 1) The Traceback method involves selecting samples from end results, tracing backwards through the activities that produced the results, evaluating each step of the activity, and continuing such an evaluation to the upper tier requirement.
  - 2) The Tracethrough method begins with the evaluation starting with the commitment of the upper tier requirement, tracing through the control model/standard, and evaluating each step until arriving at an end result.
  - 3) The Comparison method compares "from a requirement" to "the object of that requirement". It determines acceptability in terms of compliance with the requirement. Comparison always compares from the requirement to the object of the requirement. Because comparison determines acceptability, it is highly useful.
  - 4) The Reinspect/Retest technique requires the evaluation team to reinspect/retest the product, compare results with those obtained by the initial inspection/test, and explore the differences that are beyond expected repeatability.
- f. Deficiency identification describes the deficiency. A deficiency is a variance from a requirement. Deficiencies may be symptomatic, systematic, or inadvertent. Deficiencies that affect product quality, health, equipment reliability, and commitments to governmental agencies should be promptly reported to the contractor or DOE management.
- g. Conducting the exit interview is important because it verbally summarizes the assessment. The exit meeting should identify participants, discuss assessment results, deficiencies, items of concern, questions from the assessed organization, and subsequent schedule of events.
- h. Writing the report is documenting the result of an assessment. The purpose of a report is to provide documentation necessary to support findings and concerns identified by the assessor(s). The report should clearly state the status of reviewed areas and act as the reference for future

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discussions regarding corrective action plans.

Each assessment report will be unique, depending on the scope and results of the assessment. An example of a typical assessment report is shown in DOE Standard DOE-STD-1070-94 and DOE Standard DOE-STD-3006-95 and includes the following sections:

- 1) Cover Page
  - 2) Summary
  - 3) Background
  - 4) Description of Assessment
  - 5) Results and Recommendations
  - 6) Conclusion
- i. Verification of corrective actions consists of the following elements: correction of reported items, correction of identical items, identification of error cause, and action to prevent recurrence. A tracking system is a useful tool to track the identification of an open item as well the completion status. Without tracking the status, a high probability exists that some necessary steps will not be taken because of the many actions involved.

### **Quality Assurance Criteria**

There are nine quality assurance criteria used to determine acceptable and unacceptable performance. These criteria are listed in Appendix B of DOE G 414.1-1, Implementation Guide for use with Independent and Management Assessment Requirements of 10 CFR 830.120 and DOE Order 5700.6C. The criteria, which are listed below, can be used as a guide to assist the assessor(s) while conducting an assessment:

- a. Programs
- b. Personnel Training and Qualification
- c. Quality Improvement
- d. Documents and Records
- e. Work Processes
- f. Design
- g. Procurement
- h. Inspection and Acceptance Testing
- i. Management Assessment and Independent Assessment



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### **Performance Indicators**

Performance indicators are categories of information which is trended to provide insight into the performance of the system . When properly selected, these indicators may be used by management to detect impending problems. The DOE Radiological Control Manual, DOE/EH-0256T, Describes several categories of performance indicators which may be used for trending the radiological performance goals of the facility.

### **Investigations**

Events sometimes occur which lead to accidents or incidents which must be investigated and the cause determined. By identifying the cause, similar incidents in the future may be avoided. One method for analyzing the events which led to an accident is called a Root Cause Analysis. A “root cause” is a basic deficiency or failure that, if eliminated or corrected, would systematically prevent and accident’ recurrence. Root cause analysis is designed to determine an accident’s root cause when it may not be immediately apparent. Root causes involve both local problems (localized) or problems within the entire system (systemic) that allow or create deficiencies which cause or could cause unwanted occurrences.

One part of a root cause analysis is identifying the sequence of events which led up to the event which caused the accident. These are caused the event precursors. Identifying event precursors, which if they had not occurred the accident would not have happened, is a part of the analysis process.

#### **4. Practice Exercise Answers**

EXERCISE 4.1-A State the three (3) types of assessments.

- Internal
- Self
- External (also known as Independent)

EXERCISE 4.1-B Which type of assessment provides the highest amount of objectivity? Why?

External (Independent) assessments offer more objectivity. These assessments are those conducted by someone other than the individual, group, or organization. The advantage of an independent assessment is that the assessor is not associated with the actual process or activity.

EXERCISE 4.1-C In addition to monitoring work performance and identifying abnormal performance and potential problems, what three other responsibilities does a person performing independent assessments have?

- Identify opportunities for improvement
- Report results to a level of management having the authority to effect corrective action
- Verify satisfactory resolution to problems

EXERCISE 4.1-D Describe the "Performance based" assessment approach.

Performance Based assessments are merely a logical extension of the compliance plus effectiveness concept. Performance Based assessments provide additional focus toward client expectation, better practices, and process refinement. Performance Based relates to the outcome/result of an activity or process through direct observation and evaluation against defined requirements.

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**EXERCISE 4.1-E** List and describe four (4) factors that must be considered when "determining the scope" of an assessment.  
Any four of the following

- QA Systems- Refer to the criteria of DOE Order 5700.6C, 10 CFR 830.120, or the QA Manual of the facility being assessed.
- Organizational Entities- Management personnel that have the responsibilities within the evaluation topic.
- Locations- Physical area where assessment items exist.
- Programs and Activities- Types of programmatic and work processes.
- Hierarchy of Procedures- The level of procedures that are used to determine performance during the assessment.
- Calendar Time- The time allotted for an assessment. Time can affect the population to be assessed. Compliance and performance based assessments use some prior time up to the present.

**EXERCISE 4.1-F** Describe the criteria used in assessing the programs of contractor activities.

Programs- Organizations shall develop a written plan that describes the organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing adequacy of work.

**EXERCISE 4.1-G** List the six (6) elements of a program that should be evaluated.

- Commitments
- Organization
- Procedures
- Practice
- Records
- Product

**EXERCISE 4.1-H** Describe what a performance indicator is and how they are used.

Performance indicators are measures used to indicate trends or changes in the measured performance.

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EXERCISE 4.1-I List nine (9) quality assurance criteria used to determine acceptable and unacceptable performance.

- Programs
- Personnel Training and Qualification
- Quality Improvement
- Documents and Records
- Work Processes
- Design
- Procurement
- Inspection and Acceptance Testing
- Management and Independent Assessment

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**Competency 4.2 Radiation protection personnel shall demonstrate the ability to evaluate the adequacy of radiation protection programs against the requirements of regulations, Department of Energy (DOE) Orders and rules pertaining to radiation protection.**

### **1. Supporting Knowledge and/or Skills**

- a. Describe the scope, contents, development, review and approval process for a site's documented Radiation Protection Program as required by 10 CFR 835.101(a).
- b. Using the documents listed below, prepare an action plan which adequately outlines interviews and observations to be conducted, and details documents to review during an evaluation of contractor compliance with radiation protection requirements:
  - 10 CFR 835, Occupational Radiation Protection
  - Implementation Guidance for use with 10 CFR 835, Occupational Radiation Protection
  - DOE N 441.2, Radiological Protection for DOE Activities
  - DOE Order 5400.5, Radiation Protection of the Public and the Environment or 10 CFR 834, Radiation Protection of the Public and the Environment, when promulgated
  - DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities
  - DOE/EH-0256T, Department of Energy Radiological Control Manual (Current Revision)
  - DOE Order 5480.4, Environmental Protection, Safety, and Health Protection Standards
  - DOE Order 460.1A, Packaging and Transportation Safety
- c. Using an appropriate level of coverage, conduct an evaluation of contractor compliance with radiation protection requirements. During this evaluation, demonstrate the ability to properly conduct interviews, observations, and document reviews.
- d. Given data from an evaluation, analyze the results of the evaluation to determine contractor compliance or noncompliance with the requirements.
- e. Given the results from an analysis of contractor compliance or noncompliance, document the results and communicate the results to contractor and Department line management.

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### **2. Self-Study Activities (corresponding to the intent of the above competency)**

#### **NOTES:**

- The DOE Orders are in a state of transition. Please refer to the following world wide web site for a cross reference of new and old Orders:  
[www.explorer.doe.gov](http://www.explorer.doe.gov)
- Below are web sites containing many of the references you may need.

<b>Web Sites</b>		
<b>Organization</b>	<b>Site Location</b>	<b>Notes</b>
Department of Energy	<a href="http://cted.inel.gov/cted">http://cted.inel.gov/cted</a>	Clearinghouse for Training, Education, and Development
Department of Energy	<a href="http://www.explorer.doe.gov/">http://www.explorer.doe.gov/</a>	DOE Standards, Guides, and Orders
U.S. House of Representatives	<a href="http://law.house.gov/cfr.htm">http://law.house.gov/cfr.htm</a>	Searchable Code of Federal Regulations

Competency 4.2 addresses assessing contractor activities and generating the necessary reports. To support the review and understanding of the competency, Supporting Knowledge and Skills and Self-Study Information has been developed. The Self-Study Information specifically address those areas needed for understanding the competency. The supporting material for the Self-Study Information include the following documents:

- Performance Based Assessments, by Paul F. Wilson and Richard D. Pearson
- Project Management, A Systems Approach to Planning, Scheduling, and Controlling, Third Edition, by Harold Kerzner, Ph.D.
- DOE O 460.2, Packaging and Transportation and Safety
- CFR 835, Occupational Radiation Protection
- 10 CFR 834, Radiation Protection of the Public and the Environment (when promulgated)
- Implementation Guidance for use with 10 CFR 835, Occupational Radiation Protection
- DOE N 441.2, Radiological Protection for DOE Activities
- DOE Order 5400.5, Radiation Protection of the Public and the Environment
- DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities

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- DOE/EH-0256T, Department of Energy Radiological Control Manual
- DOE Order 5480.4, Environmental Protection, Safety, and Health Protection Standards
- DOE Order 460.2, Packaging and Transportation Safety

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**Read** chapters 6 through 10 of Performance Based Assessments.

EXERCISE 4.2-A Which types of questions are NOT used during the interview process of an assessment? Why?

EXERCISE 4.2-B Which evaluation technique is used to test the differences that are beyond expected repeatability?

EXERCISE 4.2-C What is the purpose of the daily Briefing Meeting with Senior Management?

EXERCISE 4.2-D What items should be discussed at the daily team meetings?

EXERCISE 4.2-E You are assigned as an assessor and are to report the results to Management, describe the three (3) main parts of the presentation and the areas addressed in each of the areas.

EXERCISE 4.2-F List the six (6) sections of a typical assessment report.

EXERCISE 4.2-G What are the three (3) stages of the writing process for developing an Assessment Report?

EXERCISE 4.2-H What is the deductive style or writing used in an Assessment Report?

**Read** Chapter 7 of Project Management, A Systems Approach to Planning, Scheduling, and Controlling.

EXERCISE 4.2-I To avoid conflicts and resolve conflicts that occur, what steps should be taken?

EXERCISE 4.2-J What are the three stages of conflict management?



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**EXERCISE 4.2-K** For each of the following conditions:  
Determine if it is a possible source of conflict.  
If yes, classify source of conflict.  
Suggest a method of overcoming the problem.

Condition	Source of Conflict (Y/N)	Type of Conflict	Method of Overcoming
1. Team conducting assessment managed by first time team leader.			
2. Person conducting assessment responsible for developing procedure being assessed.			
3. Report generated using new procedure and format.			
4. Person generating report under pressure to complete report with fast turn around time.			
5. Person receiving report up all night with sick child.			

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**Read** 10 CFR Part 835, Occupational Radiation Protection, subparts A and B.

**Read** DOE/EH-0256T, Radiological Control Manual, chapters 1 and 2.

**Read** G-10 CFR 835/B2, Implementation Guide-Occupational ALARA Program

**Read** DOE Order 5480.4, Environmental Protection, Safety, and Health  
Protection Standards

EXERCISE 4.2-L State how often are internal assessments required to be performed, and describe what the contents of the audit must include.

EXERCISE 4.2-M List the areas suggested for use as performance indicators in the Radiation Control Manual.

**Read** DOE Order 5400.5, Radiation Protection of the Public and the  
Environment

EXERCISE 4.2-N What are the two objectives of DOE Order 5400.5?

**Read** DOE Order 5480.19, Conduct of Operations Requirements for DOE  
Facilities, and Chapter 1 of Attachment 1

EXERCISE 4.2-O Discuss the policy of the DOE towards the Conduct of  
Operations at DOE facilities.

**Read** DOE O 460.2, Packaging and Transportation and Safety

EXERCISE 4.2-P How frequently are Technical Evaluations required to be performed on transportation carriers?

### **3. Summary**

#### **Assessing Contractor Activities**

During the assessment of contractor activities there are certain criteria useful in determining the acceptance or noncompliance of an item or activity. The following criteria summarized from 10 CFR 830.120(c) and DOE Order 5700.6C, Quality Assurance, provide the basis for contractor assessments:

- **Programs-** Organizations shall develop a written plan that describes the organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing adequacy of work.
- **Personnel Training and Qualifications-** Personnel shall be trained and qualified to ensure they are capable of performing their assigned work. Training should emphasize correct performance of work, provide understanding of quality requirements, and stimulate professional development.
- **Quality Improvement-** The organization shall establish and implement processes to detect and prevent quality problems and to ensure quality improvement. Items and processes that do not meet established requirements shall be identified, controlled, and corrected. Correction shall include: identifying the cause of the problems and preventing reoccurrence. Item reliability, process implementation, and other quality-related information shall be reviewed and data analyzed to identify items and processes needing improvement.
- **Documents and Records-** Documents shall be prepared, reviewed, approved, issued, used, and revised to prescribed processes, specified requirements, or established designs.

Records should be maintained and provisions provided for retention, protection, preservation, traceability, accountability, and retrievability.

- **Work Processes-** Work should be performed to technical standards and administrative controls. Work shall be performed under controlled conditions using approved instructions, procedures, or other appropriate means.
- **Design-** Process should use sound engineering/scientific principles and

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appropriate standards. Design work, including changes, shall be incorporated into applicable requirements and design bases.

- **Procurement-** The method of obtaining items or services that meet established requirements and performed as specified. Prospective suppliers shall be evaluated and selected on the basis of specific criteria.
- **Inspection and Testing-** The process by which an item is deemed acceptable or not acceptable based on established acceptance and performance criteria.

**Management Assessment-** Management at all levels shall periodically assess the integrated quality assurance program and its performance. Problems that hinder the organization from achieving its objectives shall be identified and corrected.

**Independent Assessment-** Planned and periodic independent assessments shall be conducted to measure item quality and process effectiveness and to promote improvement. The organization performing independent assessments shall have sufficient authority and freedom from the line organization to carry out its responsibilities. Persons conducting independent assessments shall be technically qualified and knowledgeable in the areas assessed.

### **Participating as an Assessor**

To assess contractor activities and prepare necessary reports it is imperative that the assessor actually participate in an assessment of a contractor's performance. To participate in an assessment, the assessor should contact his/her Quality organization to make the necessary arrangements. The reasons for participating in an assessment of a contractor's performance are to learn the assessment process, demonstrate the capability of assessment performance, and enhance the quality of the item or process. The three activities pertinent to assessing a contractor's performance are described below.

#### **a. Assessing a Contractor's Performance**

To adequately assess a contractor's performance, it is important that the person doing the assessing understand the elements of conducting an assessment.

#### **b. Reporting the Results to Management**

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Reporting the results to management can be accomplished in several ways:  
a) Daily Updates, b) Exit Meeting, and c) Assessment Report.

- 1) Daily Updates- This method is used to provide the following:
  - Daily interchange of information
  - Adjustment of schedules or assignments
  - Summary of items assessed that day and the results
  - Request of better support from organizations being assessed
  - Areas of concern/potential findings
- 2) Exit Meeting- The Exit Meeting serves to present assessment findings, ensure understanding of the findings, and clarify any misunderstandings. If the organization being assessed was kept informed during the assessment process by daily updates, the organization should not be surprised by this presentation. Presentation of assessment findings should be consistent with information being prepared for the assessment report. If possible, a draft assessment report should be presented.
- 3) Assessment Report- An effective report provides the contractor with a complete set of findings and recommendations. The report should be reviewed with contractor management for organization and accuracy prior to issuance.

### **Developing an Assessment Report**

When developing an assessment report the writing process consist of three stages: Planning, Drafting, and Reviewing.

- a. Planning- The most important stage of the writing process. During this stage, critical decisions are made about the messages and how to develop and organize the messages. The end goal is to develop an outline that clearly and concisely conveys the message(s) to the organization. Such planning provides a road map for developing the written product.
- b. Drafting- During the drafting stage, the assessor writes the report using the results of the planning stage. In writing the report, the deductive style should be used and each paragraph should have focus and flow.

In using the deductive style, a general statement or conclusion is stated first, and then supporting information is added. The supporting information should be sufficient to prove the point of the general

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statement or conclusion.

- c. **Reviewing-** Consists of examining the written product. This examination should confirm that the written message is the intended message and that it is presented clearly and concisely. Review techniques include: time between drafting and reviewing, use of a cold reader, reading aloud, and focusing on paragraphs and sentences.

### **Field Observations**

During an assessment, field observations are an important aspect that provide valuable information. Assessment team members should use established field observation techniques, including the following:

- a. Taking detailed notes of observed activities, including objective evidence obtained or reviewed, and date and time of observed activities.
- b. Logging the time that notes were taken to correlate contractor responses and personnel actions identified by other observers.
- c. Include questions, items, and reference information in notes for later follow-up.
- d. Compare notes with other observers to share information.
- e. Provide informal status to contractor on a regular basis.

### **Conflict Management**

Conflict is defined as that condition which will exist when two or more independent parties interact. Sources of conflict are: a. Individual factors, b. Organizational issues, and c. Communication. The sources of conflict are briefly described below:

- a. Individual factors include: background, social style, perceptions, and feelings.
- b. Organizational issues include: scarcity of resources, ambiguity over regulation, competition, and exceptions.

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- c. Communication conflicts can arise from problems with sender, media, and receiver.

Conflict management is defined as the process of identifying, directing, and controlling the collection of factors that result from and contribute to conflict.

Stage 1 of conflict management is defining the conflict. Stage 2 is negotiating an agreement. Stage 3 is summarizing and reviewing. Once the conflict has been identified and it is determined that a meeting is necessary, the following conflict management techniques can be applied:

- Pause and think before reacting
- Keep the meeting under control
- Listen to all parties
- Maintain a give and take attitude
- Educate others tactfully
- Be willing to acknowledge when you are wrong

#### **4. Practice Exercise Answers**

EXERCISE 4.2-A Which types of questions are NOT used during the interview process of an assessment? Why?

Leading and loaded questions are to be avoided. Using leading and loaded questions prevent the free exchange of information.

EXERCISE 4.2-B Which evaluation technique is used to test the differences that are beyond expected repeatability?

The Reinspect/Retest technique requires the evaluation team to reinspect/retest the product, compare results with those obtained by the initial inspection/test, and explore the differences that are beyond expected repeatability.

EXERCISE 4.2-C What is the purpose of the daily Briefing Meeting with Senior Management?

Allows the Team Leader to meet with the senior manager daily to ensure that the evaluation team and the evaluated organization arrive at the exit meeting with similar perspectives on the evaluation results.

EXERCISE 4.2-D What items should be discussed at the daily team meetings?

- Items for samples
- Areas of concerns
- Deficiencies
- Strengths

EXERCISE 4.2-E You are assigned as an assessor and are to report the results to Management, describe the three (3) main parts of the presentation and the areas addressed in each of the areas.

- 1) Introduction - provides the audience with the purpose and direction of the presentation.
  - Subject and purpose
  - Expected duration
  - Briefly describe major areas to be covered
  - Explanation of how questions will be handled.



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- 2) Body of the presentation - provides all the information that needs to be comprehended. The following information should be presented for each area to be evaluated.
  - Criteria or requirement
  - Conditions
  - Problems or conclusions
  - Recommendations or commitments
- 3) Conclusion - A short summarization of major ideas or points.

EXERCISE 4.2-F List the six (6) sections of a typical assessment report.

- Cover Page
- Summary
- Background
- Description of Assessment
- Results and Recommendations
- Conclusion

EXERCISE 4.2-G What are the three (3) stages of the writing process for developing an Assessment Report?

- Planning
- Drafting
- Reviewing

EXERCISE 4.2-H What is the deductive style of writing used in an Assessment Report?

The first sentence of a paragraph is a general conclusion or statement of fact. The following portion of the paragraph provides sufficient information to prove the initial statement.

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EXERCISE 4.2-I To avoid conflicts and resolve conflicts that occur, what steps should be taken?

- Ensure adequate preparation by the team
- Establish team responsibilities and communications
- Keep the organization being evaluated informed
- Involve the team leader
- Extract the facts on both sides of the issue
- Compare facts to requirements
- Either reach agreement or agree to disagree

EXERCISE 4.2-J What are the three stages of conflict management?

- Defining the conflict
- Negotiating an agreement
- Summarizing and reviewing

EXERCISE 4.2-K For each of the following conditions:

Determine if it is a possible sources of conflict.  
If yes, classify source of conflict.  
Suggest a method of overcoming the problem.

## ***Conduct of Assessments for Radiation Protection Personnel***

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Condition	Source of Conflict (Y/N)	Source of Conflict (Type)	Method of Overcoming
1. Team conducting assessment managed by first time team leader.	Possible	Individual Organizational	Possible perception of evaluated organization that the new leader is not capable/effective at performing the task. Less experienced people often regarded negatively. Ensure leader is trained and experienced in performing assessments. Separate people from the problem. Identify and address individual problem areas rather than large generalizations
2. Person conducting assessment responsible for developing procedure being assessed.	No	None	None
3. Report generated using new procedure and format.	Yes	Communication	Ensure that all personnel involved with process understand the new procedure and format. Provide objective evidence with validity of new process.

## **Conduct of Assessments for Radiation Protection Personnel**

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Condition	Source of Conflict (Y/N)	Source of Conflict (Type)	Method of Overcoming
4. Person generating report under pressure to complete report with faster turn around time.	Yes	Individual  Organizational	<p>Personnel with perception that more is required of them may react negatively. Justify the shorter time frame expected for the report. Validate the feasibility of the time. Consider negotiating an acceptable time.</p> <p>Scarcity of resources is potential organizational issue leading to conflict. Time is a valuable resource. Ensure that adequate time is available for accomplishing assigned tasks</p>
5. Person receiving report up all night with sick child.	Possible	Individual	Personnel that are fatigued may be unreceptive to perceived criticism, ensure that all comments are objective and can be supported.

**EXERCISE 4.2-L** State how often are internal assessments required to be performed, and describe what the contents of the audit must include.

Internal audits must be conducted at least once every three years and must include the program content and implementation.

## ***Conduct of Assessments for Radiation Protection Personnel***

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**EXERCISE 4.2-M** List the areas suggested for use as performance indicators in the Radiation Control Manual.

The suggested areas include: Exposure Control, Personnel Contamination, Control of Internal Exposure, Control of Contaminated Areas, Minimization of Radioactive Waste, and Control of Radioactive Discharges.

**EXERCISE 4.2-N** What are the two objectives of DOE Order 5400.5?

Protecting the Public  
Protecting the Environment

**EXERCISE 4.2-O** Discuss the policy of the DOE towards the Conduct of Operations at DOE facilities.

Experience has shown that the better operating facilities have well-defined, effectively administered policies and programs to govern the activities of the operating organization. It is the policy of the Department that the conduct of operations at DOE facilities be managed with a consistent and auditable set of requirements, standards, and responsibilities and that are consistent with the requirements of the DOE Order. These standards and responsibilities include the following requirements:

- a. Operations at DOE facilities be managed, organized, and conducted in a manner to assure an acceptable level of safety;
- b. Operators at facilities have procedures in place to control the conduct of their operations;
- c. Line organizations review existing and planned programs important to safe and reliable facility operations; and
- d. Line organizations assess the effectiveness of corporate directives, plans, or procedures at facilities under their cognizance.

## ***Conduct of Assessments for Radiation Protection Personnel***

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EXERCISE 4.2-P How frequently are Technical Evaluations required to be performed on transportation carriers?

Technical Evaluations are carried out yearly.